

12/04/01  
JC690 U.S. PTO

Please type a plus sign (+) inside this box



12-07-01

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. 1.53(b))

Attorney Docket No. 03248.00045

First Inventor Anthony C. Mulligan, et al.

Title Multi-Functional Composite Structures

Express Mail Label No. EL 820756229 US

A  
U.S. PTO  
12-04-01  
5035

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original and a duplicate for fee processing)*
- Applicant claims small entity status.  
See 37 CFR 1.27.
- Specification [Total Pages 32]  
*(preferred arrangement set forth below)*
  - Descriptive title of the Invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (*if filed*)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [Total Sheets 3 ]
- Oath or Declaration [Total Pages 3 ]
  - a.  Newly executed (original or copy)
  - b.  Copy from a prior application (37 CFR 1.63 (d))  
*(for a continuation/divisional with Box 18 completed)*
  - i.  **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (*Appendix*)
8. Nucleotide and/or Amino Acid Sequence Submission (*if applicable, all necessary*)
  - a.  Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  paper
  - c.  Statements verifying identity of above copies

## ACCOMPANYING APPLICATIONS PARTS

9.  Assignment Papers (cover sheet & document(s))
10.  37 C.F.R. §3.73(b) Statement  Power of Attorney (*when there is an assignee*)
11.  English Translation Document (*if applicable*)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503)  
*(Should be specifically itemized)*
15.  Certified Copy of Priority Document(s) (*if foreign priority is claimed*)
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17.  Other: Certificate of Mailing Via US Express Mail

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

 Continuation     Divisional     Continuation-in-part (CIP)

of prior application No: \_\_\_\_\_ / \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_

Group / Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 17. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here)		or <input type="checkbox"/> Correspondence address below			
Name	Banner & Witcoff, Ltd.				
Address	10 South Wacker Drive Suite 3000				
City	Chicago		State	Illinois	Zip Code
Country	U.S.A.		Telephone	312-715-1000	Fax 312-715-1234

Name (Print/Type)	Rebecca P. Rokos	Registration No. (Attorney/Agent)	42,109
Signature			Date December 4, 2001

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

# FEE TRANSMITTAL for FY 2002

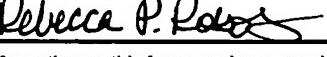
Patent fees are subject to annual revision.

**TOTAL AMOUNT OF PAYMENT** (\$ 672)

Complete if Known	
Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Anthony C. Mulligan, et al.
Examiner Name	Not Yet Assigned
Group / Art Unit	Not Yet Assigned
Attorney Docket No.	03248.00045

METHOD OF PAYMENT (check one)				FEE CALCULATION (continued)																																																																																																																																																																																													
1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:  Deposit Account Number <input type="text" value="01-0850"/>  Deposit Account Name <input type="text" value="Banner &amp; Witcoff, Ltd."/>  <input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27				3. ADDITIONAL FEES <table border="1"> <thead> <tr> <th>Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td><input type="checkbox"/></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td><input type="checkbox"/></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td><input type="checkbox"/></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for reexamination</td><td><input type="checkbox"/></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td><input type="checkbox"/></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td><input type="checkbox"/></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td><input type="checkbox"/></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td><input type="checkbox"/></td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td><td>Extension for reply within third month</td><td><input type="checkbox"/></td></tr> <tr><td>118</td><td>1,440</td><td>218</td><td>720</td><td>Extension for reply within fourth month</td><td><input type="checkbox"/></td></tr> <tr><td>128</td><td>1,960</td><td>228</td><td>980</td><td>Extension for reply within fifth month</td><td><input type="checkbox"/></td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td><td>Notice of Appeal</td><td><input type="checkbox"/></td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td><td>Filing a brief in support of an appeal</td><td><input type="checkbox"/></td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td><td>Request for oral hearing</td><td><input type="checkbox"/></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td><input type="checkbox"/></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive – unavoidable</td><td><input type="checkbox"/></td></tr> <tr><td>141</td><td>1,280</td><td>241</td><td>640</td><td>Petition to revive – unintentional</td><td><input type="checkbox"/></td></tr> <tr><td>142</td><td>1,280</td><td>242</td><td>640</td><td>Utility issue fee (or reissue)</td><td><input type="checkbox"/></td></tr> <tr><td>143</td><td>460</td><td>243</td><td>230</td><td>Design issue fee</td><td><input type="checkbox"/></td></tr> <tr><td>144</td><td>620</td><td>244</td><td>310</td><td>Plant issue fee</td><td><input type="checkbox"/></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td><input type="checkbox"/></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Processing fee under 37 CFR 1.17 (q)</td><td><input type="checkbox"/></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td><input type="checkbox"/></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td><input type="checkbox"/></td></tr> <tr><td>146</td><td>740</td><td>246</td><td>370</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td><input type="checkbox"/></td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td><input type="checkbox"/></td></tr> <tr><td>179</td><td>740</td><td>279</td><td>370</td><td>Request for Continued Examination (RCE)</td><td><input type="checkbox"/></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td><input type="checkbox"/></td></tr> <tr> <td colspan="6">Other fee (specify) _____</td> </tr> <tr> <td colspan="4">*Reduced by Basic Filing Fee Paid</td> <td colspan="2">SUBTOTAL (3) (\$ 0)</td> </tr> </tbody> </table>				Fee Code	Large Entity Fee (\$)	Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - late filing fee or oath	<input type="checkbox"/>	127	50	227	25	Surcharge - late provisional filing fee or cover sheet	<input type="checkbox"/>	139	130	139	130	Non-English specification	<input type="checkbox"/>	147	2,520	147	2,520	For filing a request for reexamination	<input type="checkbox"/>	112	920*	112	920*	Requesting publication of SIR prior to Examiner action	<input type="checkbox"/>	113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	<input type="checkbox"/>	115	110	215	55	Extension for reply within first month	<input type="checkbox"/>	116	400	216	200	Extension for reply within second month	<input type="checkbox"/>	117	920	217	460	Extension for reply within third month	<input type="checkbox"/>	118	1,440	218	720	Extension for reply within fourth month	<input type="checkbox"/>	128	1,960	228	980	Extension for reply within fifth month	<input type="checkbox"/>	119	320	219	160	Notice of Appeal	<input type="checkbox"/>	120	320	220	160	Filing a brief in support of an appeal	<input type="checkbox"/>	121	280	221	140	Request for oral hearing	<input type="checkbox"/>	138	1,510	138	1,510	Petition to institute a public use proceeding	<input type="checkbox"/>	140	110	240	55	Petition to revive – unavoidable	<input type="checkbox"/>	141	1,280	241	640	Petition to revive – unintentional	<input type="checkbox"/>	142	1,280	242	640	Utility issue fee (or reissue)	<input type="checkbox"/>	143	460	243	230	Design issue fee	<input type="checkbox"/>	144	620	244	310	Plant issue fee	<input type="checkbox"/>	122	130	122	130	Petitions to the Commissioner	<input type="checkbox"/>	123	50	123	50	Processing fee under 37 CFR 1.17 (q)	<input type="checkbox"/>	126	180	126	180	Submission of Information Disclosure Stmt	<input type="checkbox"/>	581	40	581	40	Recording each patent assignment per property (times number of properties)	<input type="checkbox"/>	146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	<input type="checkbox"/>	149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	<input type="checkbox"/>	179	740	279	370	Request for Continued Examination (RCE)	<input type="checkbox"/>	169	900	169	900	Request for expedited examination of a design application	<input type="checkbox"/>	Other fee (specify) _____						*Reduced by Basic Filing Fee Paid				SUBTOTAL (3) (\$ 0)	
Fee Code	Large Entity Fee (\$)	Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																												
105	130	205	65	Surcharge - late filing fee or oath	<input type="checkbox"/>																																																																																																																																																																																												
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	<input type="checkbox"/>																																																																																																																																																																																												
139	130	139	130	Non-English specification	<input type="checkbox"/>																																																																																																																																																																																												
147	2,520	147	2,520	For filing a request for reexamination	<input type="checkbox"/>																																																																																																																																																																																												
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	<input type="checkbox"/>																																																																																																																																																																																												
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	<input type="checkbox"/>																																																																																																																																																																																												
115	110	215	55	Extension for reply within first month	<input type="checkbox"/>																																																																																																																																																																																												
116	400	216	200	Extension for reply within second month	<input type="checkbox"/>																																																																																																																																																																																												
117	920	217	460	Extension for reply within third month	<input type="checkbox"/>																																																																																																																																																																																												
118	1,440	218	720	Extension for reply within fourth month	<input type="checkbox"/>																																																																																																																																																																																												
128	1,960	228	980	Extension for reply within fifth month	<input type="checkbox"/>																																																																																																																																																																																												
119	320	219	160	Notice of Appeal	<input type="checkbox"/>																																																																																																																																																																																												
120	320	220	160	Filing a brief in support of an appeal	<input type="checkbox"/>																																																																																																																																																																																												
121	280	221	140	Request for oral hearing	<input type="checkbox"/>																																																																																																																																																																																												
138	1,510	138	1,510	Petition to institute a public use proceeding	<input type="checkbox"/>																																																																																																																																																																																												
140	110	240	55	Petition to revive – unavoidable	<input type="checkbox"/>																																																																																																																																																																																												
141	1,280	241	640	Petition to revive – unintentional	<input type="checkbox"/>																																																																																																																																																																																												
142	1,280	242	640	Utility issue fee (or reissue)	<input type="checkbox"/>																																																																																																																																																																																												
143	460	243	230	Design issue fee	<input type="checkbox"/>																																																																																																																																																																																												
144	620	244	310	Plant issue fee	<input type="checkbox"/>																																																																																																																																																																																												
122	130	122	130	Petitions to the Commissioner	<input type="checkbox"/>																																																																																																																																																																																												
123	50	123	50	Processing fee under 37 CFR 1.17 (q)	<input type="checkbox"/>																																																																																																																																																																																												
126	180	126	180	Submission of Information Disclosure Stmt	<input type="checkbox"/>																																																																																																																																																																																												
581	40	581	40	Recording each patent assignment per property (times number of properties)	<input type="checkbox"/>																																																																																																																																																																																												
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	<input type="checkbox"/>																																																																																																																																																																																												
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	<input type="checkbox"/>																																																																																																																																																																																												
179	740	279	370	Request for Continued Examination (RCE)	<input type="checkbox"/>																																																																																																																																																																																												
169	900	169	900	Request for expedited examination of a design application	<input type="checkbox"/>																																																																																																																																																																																												
Other fee (specify) _____																																																																																																																																																																																																	
*Reduced by Basic Filing Fee Paid				SUBTOTAL (3) (\$ 0)																																																																																																																																																																																													
2. EXTRA CLAIM FEES <table border="1"> <thead> <tr> <th>Total Claims</th> <th>24</th> <th>-20 **</th> <th>= 4</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Independent Claims</td> <td>6</td> <td>-3 **</td> <td>= 3</td> <td>X 42</td> <td>= 126</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Multiple Dependent</td> <td>1</td> <td></td> <td></td> <td>X 140</td> <td>= 140</td> <td><input type="checkbox"/></td> </tr> </tbody> </table> Large Entity Small Entity <table border="1"> <thead> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Description</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203</td><td>9</td><td>Claims in excess of 20</td></tr> <tr><td>102</td><td>84</td><td>202</td><td>42</td><td>Independent claims in excess of 3</td></tr> <tr><td>104</td><td>280</td><td>204</td><td>140</td><td>Multiple dependent claim, if not paid</td></tr> <tr><td>109</td><td>84</td><td>209</td><td>42</td><td>** Reissue independent claims over original patent</td></tr> <tr><td>110</td><td>18</td><td>210</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td></tr> </tbody> </table> SUBTOTAL (2) (\$ 302)				Total Claims	24	-20 **	= 4	Extra Claims	Fee from below	Fee Paid	Independent Claims	6	-3 **	= 3	X 42	= 126	<input type="checkbox"/>	Multiple Dependent	1			X 140	= 140	<input type="checkbox"/>	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	103	18	203	9	Claims in excess of 20	102	84	202	42	Independent claims in excess of 3	104	280	204	140	Multiple dependent claim, if not paid	109	84	209	42	** Reissue independent claims over original patent	110	18	210	9	** Reissue claims in excess of 20 and over original patent																																																																																																																																											
Total Claims	24	-20 **	= 4	Extra Claims	Fee from below	Fee Paid																																																																																																																																																																																											
Independent Claims	6	-3 **	= 3	X 42	= 126	<input type="checkbox"/>																																																																																																																																																																																											
Multiple Dependent	1			X 140	= 140	<input type="checkbox"/>																																																																																																																																																																																											
Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description																																																																																																																																																																																													
103	18	203	9	Claims in excess of 20																																																																																																																																																																																													
102	84	202	42	Independent claims in excess of 3																																																																																																																																																																																													
104	280	204	140	Multiple dependent claim, if not paid																																																																																																																																																																																													
109	84	209	42	** Reissue independent claims over original patent																																																																																																																																																																																													
110	18	210	9	** Reissue claims in excess of 20 and over original patent																																																																																																																																																																																													

\*\*or number previously paid, if greater; For Reissues, see above

SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Rebecca P. Rokos	Registration No. Attorney/Agent)	42,109
Signature			Date December 4, 2001

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

## Certificate of Mailing by Express Mail under 37 CFR 1.10

Express Mail No.: EL 820756229 US

Date Deposited: December 4, 2001

I hereby certify that the attached correspondence, identified below, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" under 37 CFR § 1.10 on the date indicated above in an envelope addressed to:

U.S. Patent and Trademark Office  
Box Patent Application  
P. O. Box 2327  
Washington, D.C. 22202

By: Rebecca P. Rose  
(person actually depositing)

Application Number: Not Yet Assigned  
Filing Date: Concurrently Herewith  
First Named Inventor: Anthony C. Mulligan, et al.  
Group Art Unit: Not Yet Assigned  
Examiner Name: Not Yet Assigned  
Attorney Docket No. 03248.00045

1. Utility Patent Application Transmittal;
2. Fee Transmittal for FY 2002;
3. Application Data Sheet;
4. Patent Application (32 sheets including Abstract);
5. Three pages drawings (containing Figs. 1 through 5);
6. Joint Declaration for Patent Application; and
7. Return Post Card

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.